

### Amendments to the Claims

#### Claims 1-4 (Cancelled)

1 ~~5~~. (Previously Presented) An apparatus for correlating a spread-spectrum signal sample with a reference code, comprising:

spread spectrum signal storage means for storing the spread-spectrum signal sample at a present sampling instance and at a previous sampling instance;

subtraction means for calculating a difference between the present sampling instance and the previous sampling instance;

multiplication means for computing the multiplication result of the difference calculated by the subtraction means and an element of the reference code;

correlation lag storage means for storing a correlation lag obtained at the last previous sampling instance; and

addition means, coupled to the outputs of the multiplication means and the correlation lag storage means;

wherein the addition means generates a correlation lag for the present sampling instance based on the correlation lag at the <sup>last</sup> previous sampling instance.

#### Claims 6-8 (Cancelled)

2 ~~9~~. (Presently Presented) The apparatus of claim <sup>1</sup>~~5~~, wherein the spread-spectrum signal sample is generated from a received BPSK signal composed by means of periodic repetition of a PN sequence.

- 3 10. (Previously Presented) The apparatus of claim 8, wherein the spread-spectrum signal sample is generated from a received CPSK signal composed by means of periodic repetition of a PN sequence.
- 4 11. (Previously Presented) The apparatus of claim 5, wherein the correlation lags<sup>for</sup> at the present sampling instance<sup>is an</sup> are even-correlation lags.
- 5 12. (Original) The apparatus of claim 8, further including a negator configured to generate odd correlation lags.
- 6 13. (Previously Presented) An apparatus for correlating a plurality of streams of a spread-spectrum signal sample with a reference code, comprising:
- spread spectrum signal storage means for storing the spread-spectrum signal sample at a present sampling instance and at a previous sampling instance for each stream;
  - subtraction means for calculating a difference between the present sampling instance and the previous sampling instance for each stream;
  - multiplication means computing the multiplication result of the difference calculated by the subtraction means and an element of the reference code for each stream, the element of the reference code for each stream being the same element;
  - correlation lag storage means for storing a correlation lag obtained at the last previous sampling instance for each stream; and
  - addition means, coupled to<sup>the</sup> output of the multiplication means and the correlation lag storage means;
- wherein the addition means generates a correlation lag for the present sampling instance based on the correlation lag at the<sup>last</sup> previous sampling instance.

7 14. (Original) An apparatus of claim <sup>6</sup>13, wherein the plurality of streams of <sup>the</sup> spread-spectrum signal samples <sup>is</sup> are generated from a BPSK signal composed by means of periodic repetition of a PN sequence.

8 15. (Original) An apparatus of claim <sup>6</sup>13, wherein the plurality of streams of <sup>the</sup> spread-spectrum signal samples <sup>is</sup> are generated from a CPSK signal composed by means of periodic repetition of a PN sequence.

9 16. (Original) An apparatus of claim <sup>6</sup>13, wherein the plurality of streams of <sup>the</sup> spread-spectrum signal samples <sup>is</sup> are generated from a QPSK signal composed by means of periodic repetition of a PN sequence.

10 17. (Original) An apparatus of claim <sup>6</sup>13, wherein the plurality of streams of <sup>the</sup> spread-spectrum signal samples <sup>is</sup> are generated from a multicarrier BPSK signal ~~each of subcarrier signals~~ being composed by means of periodic repetition of a PN sequence.

11 18. (Original) An apparatus of claim <sup>6</sup>13, wherein the plurality of streams of <sup>the</sup> spread-spectrum signal samples <sup>is</sup> are generated from a multicarrier QPSK signal ~~each of subcarrier signals~~ being composed by means of periodic repetition of a PN sequence.

Claim 19 (Cancelled)